ELSEVIER

Animal Feed Science and Technology 72 (1998) 403–405

ANIMAL FEED SCIENCE AND TECHNOLOGY

Contents of *Animal Feed Science and Technology*, Volume 72

VOL. 72 NOS. 1–2 **MAY 1998**

Improvement of the *Streptomyces griseus* method for degradable protein in ruminant feeds
G. Licitra, F. Lauria, S. Carpino, I. Schadt (Ragusa, Italy), C.J. Sniffen (Chazy, NY, USA) and P.J. Van Soest (Ithaca, NY, USA) 1

Effect of particle size of corn grains on the release of nutrients and in sacco degradability
M. Wadhwa, D. Paul, P. Kataria and M.P.S. Bakshi (Ludhiana, India) 11

In vitro gas production from buffel grass (*Cenchrus ciliaris* L.) fermentation in relation to the cutting interval, the level of nitrogen fertilisation and the season of growth
M. González Ronquillo, M. Fondevila (Zaragoza, Spain), A. Barrios Urdaneta and Y. Newman (Maracaibo, Venezuela) 19

Effect of free-range feeding on $n-3$ fatty acid and α-tocopherol content and oxidative stability of eggs
C.J. Lopez-Bote, R. Sanz Arias, A.I. Rey, A. Castaño, B. Isabel and J. Thos (Madrid, Spain) 33

Regions of normalised near infrared reflectance difference spectra related to the rumen degradation of fresh grass, grass silage and maize silage
E.R. Deaville and D.I. Givens (Stratford, UK) 41

The effects of moisture concentration and type on quality characteristics of alfalfa hay baled under two density regimes in a model system
W.K. Coblentz, J.O. Fritz, K.K. Bolsen, C.W. King and R.C. Cochran (Manhattan, USA) 53

Effect of different dietary concentrations of spray-dried porcine plasma and a modified soyprotein product on the growth performance of piglets weaned at 6 kg body weight
E. Angulo and D. Cubiló (Lleida, Spain) 71

Chemical composition, rumen degradation, and gas production characteristics of some multipurpose fodder trees and shrubs during wet and dry seasons in the humid tropics
A. Larbi, J.W. Smith (Ibadan, Nigeria), I.O. Kurdi (El-Obeid, Sudan), I.O. Adekunle (Ibadan, Nigeria), A.M. Raji (Ife, Nigeria) and D.O. Ladipo (Ibadan, Nigeria) 81

Whole cottonseed in dairy cattle feeding: a review
A. Arieli (Rehovot, Israel) 97

Waxy corn as a replacement for dent corn for lactating dairy cows
J.W. Schroeder (Fargo, ND, USA), G.D. Marx (Crookston, MN, USA) and C.S. Park (Fargo, ND, USA) 111

Effect of extruded lupin seeds as a protein source on lactational performance of dairy cows
C. Bayourthe, R. Moncoulon and F. Enjalbert (Toulouse, France) 121

Value of sheanut cake as a dietary ingredient for broiler chickens
C.C. Atuahene, A. Donkoh and F. Asante (Kumasi, Ghana) 133

Influence of alkaloids and oligosaccharides from white lupin seeds on utilization of diets by rats and absorption of nutrients in the small intestine
Z. Zdunczyk, J. Juskiewicz, S. Frejnagel (Olsztyn, Poland) and K. Gulewicz (Poznan, Poland) . . . 143

The use of near infrared reflectance spectroscopy (NIRS) on undried samples of grass silage to predict chemical composition and digestibility parameters
R.S. Park, R.E. Agnew, F.J. Gordon and R.W.J. Steen (Belfast, UK) 155

Short communications

Production and chemical composition of alfalfa protein concentrate obtained by freezing
A. Hernández, T. Hernández and C. Martínez (Madrid, Spain) 169
Proteolysis and rumen degradability of protein in alfalfa preserved as silage, wilted silage or hay
A.N. Hristov and S.G. Sandev (Kostinbrod, Bulgaria) 175
Nutritive value of oak (*Quercus semecarpifolia*) leaves in pashmina kids
P. Singh, A.K. Verma, N.N. Pathak (Izatnagar, India) and J.C. Biswas (Nainital, India) 183
Evaluating variation in feed attributes of elite grain sorghum cultivars
K. Agyemang, A. Larbi (Ibadan, Nigeria) and D.S. Murty (Kano, Nigeria) 189
Influence of builder's sand on the TME of linseed for poultry
K.-T. Nam, H.-A. Lee, Y.-J. Joo, K.-H. Kim and C.-W. Kang (Seoul, South Korea) 199

VOL. 72 NOS. 1–2 JUNE 1998

Publisher's Note iii

In sacco degradation characteristics as predictors of digestibility and voluntary intake of roughages by mature ewes
A.J.M. Fonseca, A.A. Dias-da-Silva (Vila Real, Portugal) and E.R. Ørskov (Aberdeen, UK) 205
Effect of microbial phytase on digestibility and utilisation of phosphorus and protein in pigs fed wet barley protein with fibre
J. Valaja, S. Plaami (Jokioinen, Finland) and H. Siljander-Rasi (Uusimaa, Finland) 221
Review of the effect of nitrogen fertilization on the chemical composition, intake, digestion and nutritive value of fresh herbage: consequences on animal nutrition and N balance
J.L. Peyraud and L. Astigarraga (Saint Gilles, France) 235
In vitro gas measuring techniques for assessment of nutritional quality of feeds: a review
G. Getachew, M. Blümmel, H.P.S. Makkar and K. Becker (Stuttgart, Germany) 261
Determination of energy, protein and amino acid requirements for maintenance and growth in ostriches
S.C. Cilliers (Oudtshoorn, South Africa), J.P. Hayes (Stellenbosch, South Africa), A. Chwalibog (Frederiksberg, Denmark), J. Sales and J.J. Du Preez (Stellenbosch, South Africa) 283
Effect of feed hydration on the dynamics of in situ ruminal digestion
R.N. Corley III, J.E. Wold, S.N. Carithers, A.O. Bahaa and M.R. Murphy (Urbana, USA) 295
Expansion and pelleting of starter, grower and finisher diets for pigs: effects on nitrogen retention, ileal and total tract digestibility of protein, phosphorus and calcium and in vitro protein quality
J. Vande Ginste and R. De Schrijver (Leuven, Belgium) 303
In vitro hydrolysis of phytate in canola meal with purified and crude sources of phytase
R.W. Newkirk and H.L. Classen (Saskatoon, Sask., Canada) 315
Effect of β-glucanase supplementation on pancreatic enzyme activity and nutrient digestibility in piglets fed diets based on hulled and hulless barley varieties
M.S. Jensen, K.E. Bach Knudsen (Tjele, Denmark), J. Inborr (Marlborough, UK) and K. Jakobsen (Tjele, Denmark) 329
Chemical changes during ensiling of sudax fodder with broiler litter
S. Rasool, M.A. Sial, Ahsan-ul-Haq and A. Jamil (Faisalabad, Pakistan) 347
Effect of feeding graded levels of *Leucaena leucocephala*, *Leucaena pallida*, *Sesbania sesban* and *Chamaecytisus palmensis* supplements to teff straw given to Ethiopian highland sheep
R.J. Kaitho (Addis Ababa, Ethiopia; Wageningen, Netherlands), N.N. Umunna, I.V. Nsahlai (Addis Ababa, Ethiopia), S. Tamminga and J. Van Bruchem (Wageningen, Netherlands) 355
Effects of paraquat on rumen microbial function in vitro
M.B. Roigé, M.O. Tapia and R. Rubio (Tandil, Argentina) 367

Degradation characteristics of straw from different wheat genotypes and their response to urea-ammoniation treatment
G. Habib, M.F. Hassan and M.M. Siddiqui (Peshawar, Pakistan) 373
Promising tropical grasses and legumes as feed resources in Central Tanzania: VI. Nitrogen balance in growing bulls consuming tropical herbaceous forage legumes
R.N. Mero (Arusha, Tanzania) and P. Udén (Uppsala, Sweden) 387

Short communication
Digestion of a diet very high in fibre in Cuban Creole pigs
J. Ly, F.J. Diéguez, R.M. Martinez and A. García (Havana, Cuba) 397

Contents of *Animal Feed Science and Technology*, Volume 72 403